

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/014685

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ C07D277/42, 513/04, 417/12, 417/04, 417/06, 417/14, A61K31/496, 31/427, 31/497, A61P43/00, 7/02, 9/10, 25/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ C07D277/42, 513/04, 417/12, 417/04, 417/06, 417/14, A61K31/496, 31/427, 31/497, A61P43/00, 7/02, 9/10, 25/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

REGISTRY, CAPLUS, BIOSIS, MEDLINE, EMBASE (STN), WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2002/055510 A1 (SOCOETE DE CONSEILS DE RECHERCHES ET D'APPLICATIONS SCIENTIFIQUES), 18 July, 2002 (18.07.02), Full text; particularly, Claims; examples 2304 to 2343 (Family: none)	14
X	WO 2001/007424 A1 (SOCOETE DE CONSEILS DE RECHERCHES ET D'APPLICATIONS SCIENTIFIQUES), 01 February, 2001 (01.02.01), Full text; particularly, Claims; example 1476 & JP 2003-505453 A & EP 1202980 A1	14

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"T" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
15 December, 2004 (15.12.04)Date of mailing of the international search report
28 December, 2004 (28.12.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-11071 A (Mochida Pharmaceutical Co., Ltd.), 16 January, 2001 (16.01.01), Full text (Family: none)	1-19,23-25
A	WO 1999/033805 A1 (Mochida Pharmaceutical Co., Ltd.), 08 July, 1999 (08.07.99), Full text & EP 1048652 A1	1-19,23-25
A	JP 11-236372 A (Takeda Chemical Industries, Ltd.), 31 August, 1999 (31.08.99), Full text & WO 1998/054164 A1 & EP 986551 A1	1-19,23-25
A	WO 2002/060894 A1 (BRISTOL-MYERS SQUIBB COMPANY), 08 August, 2002 (08.08.02), Full text & JP 2004-518688 A	1-19,23-25

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 20-22
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 20 to 22 pertain to methods for treatment of the human body by therapy.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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With respect to claims 1-12, 14-19, and 23-25, these claims pertain to compounds themselves which include a wide range of compounds, a use thereof, etc. However, it is considered that the compounds which are supported by the description in the meaning of Article 6 of the PCT and are disclosed in the meaning of Article 5 of the PCT are limited to an extremely small part of the compounds claimed.

Consequently, a search was made mainly for the compounds which are supported by and disclosed in the description, i.e., the compounds in which R is an aromatic hydrocarbon or heterocycle, a is 2, ring A is piperidine or piperazine, and Z1, Z2, and Z3 as a whole are a bond, methylene, ethylene, or propylene.

A complete search was made with respect to claim 13.

With respect to the medicinal uses of claims 18, 19, and 24, no specific date showing effectiveness in the medicinal uses are given in the description. A test method is merely described. The claims are hence not sufficiently supported by the description. Furthermore, with respect to claims 16, 17, 23, and 24 also, persons skilled in the art cannot understand that all of the wide range of compounds given in the claims are effective in the medicinal uses.

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